TACTICAL SAFETY
Fort A.P. Hill

Utilities

- Obtain DIG PERMITS from Directorate of Public Works (DPW) for any Excavation or when placing any item into the ground including stakes!
- Dig permits from DPW must be obtained to drive the stakes securing your antenna.

Utilities

- Obtain Antenna permits from Installation Safety Office when erecting items (Antennas, Drilling Rigs, Tents etc.) in restricted areas or within 100 feet of overhead lines.
- Obtain from DPTMS when on ranges and in un-restricted areas

Utilities - Close Call

WEATHER INJURY PREVENTION MEASURES

RECOGNIZE THE SYMPTOMS

TREATMENT

Fort A.P. Hill Installation Safety Office

WEATHER INJURIES

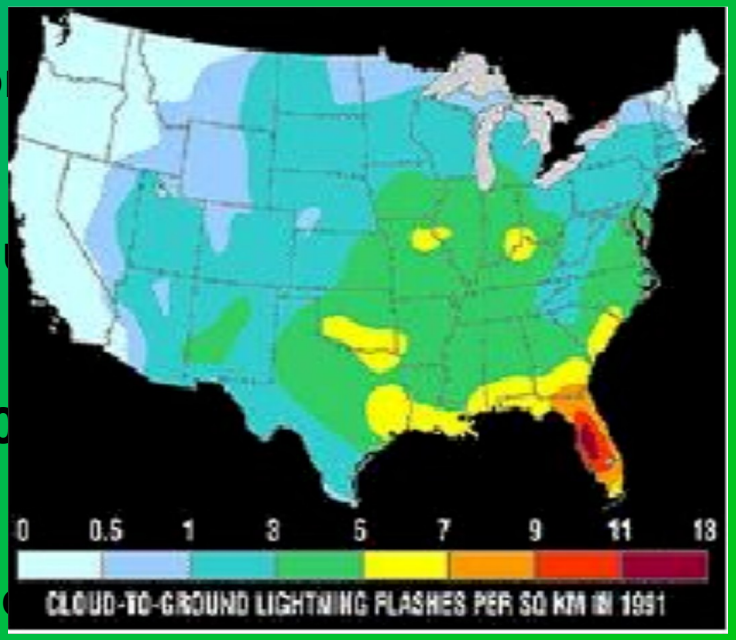
Prevention is the key!

- **Educate soldiers**
- **Hydration**
- **Nutrition**
- **Rest**
- **Physical conditioning**
- **Acclimate**
- **When possible limit**

LIGHTNING - YOUR BIGGEST WEATHER CONCERN

Risk Assessment

- Lightning is the leading killer of all weather phenomena
- Each year lightning kills more people than tornadoes and hurricanes combined
- Lightning strikes are most commo Southeast
- 73% of incidents happen in June, J August
- Lightning bolt carries up to 100,0 volts
- Vaporizes its path with a 30,000 d plasma
- If it doesn't electrocute you, it will set you on fire or explode you



CONTROLS:

Before the storm:

- **Check weather forecasts**
- **Keep a watchful eye out for signs of approaching storm**

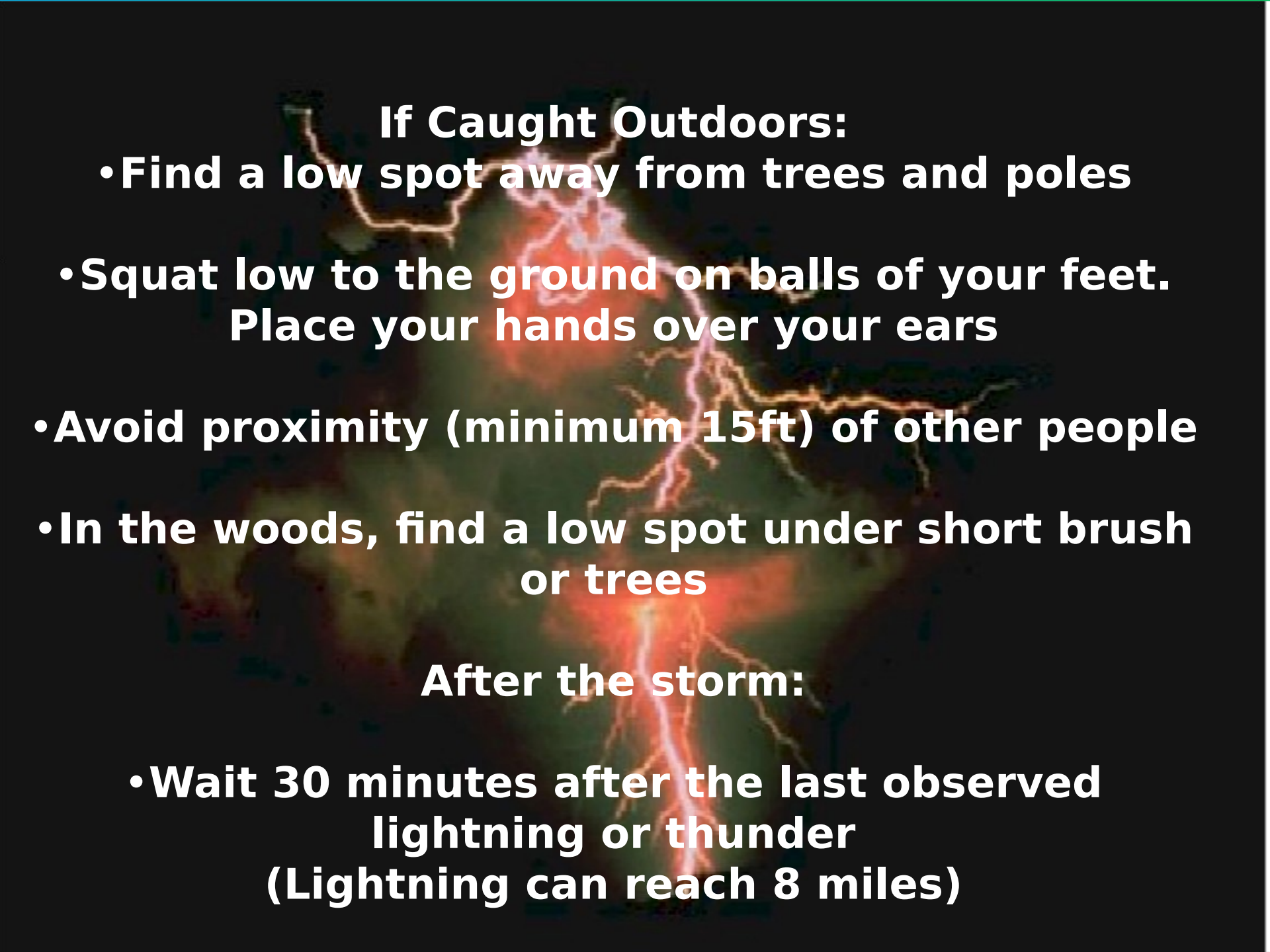
When you hear thunder:

- **If on the water, immediately move to land**
- **If on land, immediately move to a building**
- **Do not go to picnic or rain shelters or trees**
- **Stay away from windows, water pipes and appliances**

(TIP: cordless is OK)

- **If you cannot get to a building get to a vehicle with a metal roof**

An enclosed metal vehicle provides protecti



If Caught Outdoors:

- **Find a low spot away from trees and poles**
- **Squat low to the ground on balls of your feet. Place your hands over your ears**
- **Avoid proximity (minimum 15ft) of other people**
- **In the woods, find a low spot under short brush or trees**

After the storm:

- **Wait 30 minutes after the last observed lightning or thunder (Lightning can reach 8 miles)**

HEAT INJURIES

Sunburn

Symptoms **- *re*ddening skin, burning.**

Treatment **- Get out of the sun, use sunscreen._**

HEAT INJURIES

Heat Cramps

Symptoms **- cramps, excessive sweating, thirst, & dizziness.**

Treatment **- move to shade, loosen clothing, slowly drink water, seek medical aid if cramps continue.**

HEAT INJURIES

Heat Exhaustion

Symptoms **- profuse sweating, headaches, weakness, dizziness, loss of appetite, heat cramps, nausea -- vomiting, urge to defecate, chills, rapid breathing, tingling in hands/feet, & rapid breathing.**

Treatment **- move to shade, loosen clothing/boots, pour water on casualty, slowly drink water, elevate legs, seek medical aid.**

HEAT INJURIES

Heat Stroke

Symptoms **- red hot dry skin, stop sweating, headaches, dizziness, nausea -- stomach pain, confusion, weakness, loss of consciousness, seizures, weak & rapid pulse and breathing.**

Treatment **- move to shade, loosen clothing/boots, immerse in water, elevate legs, slowly drink 1 canteen of cool water, ice packs in neck, groin & underarms, get medical aid.**

COLD WEATHER INJURIES

Chilblain

Symptoms **- red swollen skin, skin lesions.**

Treatment **- warm with body parts and get medical aid.**

*** Do not rub affected areas.**

COLD WEATHER INJURIES

Frostbite

Symptoms **- *loss of sensation, sudden whitening of sk*in- tingling, redness or grayish coloring of the skin, blisters & swelling, yellow waxy looking skin, frozen area fell hard like wood.**

Treatment **- warm with body parts, remove tight clothing/jewelry, cover with blankets and get medical aid.**

*** Do not rub affected areas.**

COLD WEATHER INJURIES

Prevention is the key!

- **Educate soldiers**
- **Hydration/Nutrition**
- **Proper clothing/equipment**
- **Rest**
- **Physical conditioning**
- **Acclimate**
- **When possible limit exposure**

COLD WEATHER INJURIES
Clean clothes
Over-heating
Loosen clothing
Dry clothes

WEATHER INJURIES

Dehydration

Symptoms **- dizziness, weakness, blurred vision.**

Treatment **- replace lost water, sip water.**

Nothing Replaces Water

WEATHER INJURIES

Immersion/Trench Foot

Symptoms **- cold- numb- painless, burning shooting pain, pale bluish skin, decreased pulse, blistering and swelling.**

Treatment **- gradual warming, dry feet, avoid walking, protect from trauma, seek medical aid.**

WEATHER INJURIES

Hypothermia

WARNING MEDICAL EMERGENCY

Symptoms **- cold shivering stops, core temperature is low, uncoordinated move-ments, shock or coma, body temperature drops.**

Treatment **- warm liquids if conscious, start life support measures if necessary, get medical aid immediately.**

VISIBILITY

Lower speeds in limited visibility

Clean Windows

Remove vehicle camouflage before driving

VISIBILITY

Maintain accountability of all soldiers

Wear eye protection in wooded environments

Maintain Ground Guide Procedures

TACTICAL SAFETY

Safety program elements that are especially critical in a tactical environment:

- **Risk management.**
- **Explosives Safety.**
- **Endurance and Sleep Deprivation.**
- **Gunnery operations.**
- **Night operations.**
- **Convoy operations.**
- **Maintenance safety.**

TACTICAL SAFETY

- **POL safety.**
- **PPE.**
- **Hearing conservation.**
- **Environment (weather, critters, altitude, political).**
- **Bivouac site operations.**
- **Off road vehicle operations.**
- **Weapons and ammunition safety.**
- **Overhead and underground utilities.**

Train as You Fight - Protect Life, Limit Exposure

PRE-DEPLOYMENT

- Establish ONE Safety POC with the Fort A.P. Hill Installation Safety Office (804) 633-8268/8269
- Brief unique requirements of training at A.P. Hill
- Use info for mission planning.

Mission planning phase:

- Evaluate mission.
- Hazard ID, Assess, Controls.
- Risk reduction.
- Permit Request where required

Think Ahead
KING
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PRE-DEPLOYMENT

Safety briefings, meetings, classes:

- **Environmental concerns**
- **Weather related injury prevention**
- **Convoy Ops**
- **Responsibilities in the event of a Mish**
- **Weapons/Ammo Safety**
- **Stove/heater maintenance & Operatio**
- **Load Plans**
- **CBT Lifesavers**

Pre-deployment checks for adequate PPE:

- **Cold/wet weather.**
- **Hot/dry weather.**

CONVOY - What conditions will you Encounter enroute to Fort A.P. Hill

Pre-Convoy/Load out safety:

- **Ensure all personnel attend the convoy briefings.**

- **Ensure all personnel know what the procedures are if they become separated from the convoy.**

Pre-Convoy/Load out safety

Check the following:

- **Driver & assistant driver qualification (NVD, HAZ).**
- **Crew rest.**
- **Appropriate maps for each vehicle.**
- **Emergency equipment.**
- **Briefed on convoy speeds and following distances.**

Pre-Convoy/Load out safety

Check the Condition of Vehicles:

- Obvious leaks.
- Serviceable & clean windshields, mirrors, & lights.
- Serviceable tires (tread, inflation, lug nuts, etc.).
- Load security.
- Antennas tied down.

Enroute, Recovery to Home Station and while Training at Fort A.P. Hill

- **Accidents vs. Breakdowns… Brief what everyone is to do.**
- **Determine procedures for notification of higher headquarters in the event of an accident.**

Accident Notifications

Recovery Operations Plans / Procedures

Tactical Vehicle

Mishap Prevention

Fort A.P. Hill Installation Safety Office

PAST HISTORY CAUSES

- Speeding/too fast for conditions
- Following too close
- Backing without ground guides
- Misjudging clearance
- Inattention

SOURCES OF HUMAN ERROR

- INDIVIDUAL
- TRAINING
- LEADER
- STANDARDS
- SUPPORT

INDIVIDUAL

Self-discipline

DRIVER FAILURES

- **SPEEDING**
- **BACKING W/O A GROUND-GUIDE**
- **FOLLOWING TOO CLOSE**
- **INATTENTION**

TRAINING

Training is insufficient, incorrect, or no training is given for the task.

DRIVER FAILURES

- **DRIVING TOO FAST FOR CONDITIONS**
- **BACKING W/O A GROUND-GUIDE**
- **FOLLOWING TOO CLOSE**
- **MISJUDGING CLEARANCE**

LEADER

Leader does not enforce known standards, or improperly supervises.

FAILURES

- **INADEQUATE DRIVER TRAINING**
- **INADEQUATE PROCEDURES**
- **LACK OF CORRECTIVE ACTION**

STANDARDS

Standard or procedure is not clear, practical, or none existent.

FAILURE

- **MATERIAL FAILURE**
- **WRONG ACTION/PROCEDURE**

- **DRIVING HAZARDS**

SUPPORT

Inadequate facilities/services, equipment or material is improperly designed or not provided.

FAILURES

- **INADEQUATE MECHANIC TRAINING**
- **DRIVING HAZARDS**
- **MATERIAL FAILURE**

SAFE DRIVING OPERATION

Headphones or earphones are prohibited while driving.

- Drivers will not eat, drink, or smoke while vehicle is in motion.
- Drivers will not use Cell Phones while vehicle is in motion.

SAFE DRIVING OPERATION

Prior to dispatch, perform a good preventative maintenance, checks, and services (PMCS) to prevent:

- Any condition likely to cause injury or component failure.
- Improperly secured load.
- Unsafe transport of personnel.
- Vehicle load capacity exceeded.

SAFE DRIVING OPERATION

- Operators are responsible for bringing any vehicle shortcoming to the supervisor’s attention.
- Vehicle’s will not be operated with hazardous conditions unless authorized by the unit commander.

FIRE PREVENTION

- Free Of Gasoline Leak & Class III Diesel, Oil, & Water Leaks.
- Electric Lamps Must Meet National Electric Code Standards (NEC)
- No Smoking In Shops, Garages, Or Motor Pool OR Unmarked Areas.

FIRE PREVENTION

- No Smoking in Parking areas.
  (Except in designated area)
- When refueling turn Off engine, put in low range.
- Set Parking brake or chock wheels.
- Gasoline will not be used for any cleaning purpose.

HAZARDOUS MATERIAL

- Flammable
- Ammunition
- Poisons
- Combustibles

HAZARDOUS MATERIAL

- Placarding requirements comply with Title 49, Code of Federal Regulation and host nation.
- Load blocked and braced IAW DOT regs.

HAZARDOUS MATERIAL

Drivers will:

- Follow preplanned route. (Prepare Trip Maps)
- Park To limit exposure.
- Park no less than minimum fire separation distance (National Fire Protection Association).

HAZARDOUS MATERIAL

Training Requirements For Drivers

- Emergency Equipment.
- Forms & Records (Accident Reporting)
- Records of Training Maintained.
- Recurrent Training is required every two years to transport Hazardous Materials

HAZARDOUS MATERIAL

- Containers must meet DOT regulations.
- No riders on or in cargo area transporting explosives, fuel, or other hazardous material.
- Explosives transport prohibited in passenger compartment of vehicles, or commercial vehicles.

SAFETY EQUIPMENT

- Seat Belts Will Be Worn By All.
- Eye protection will be worn (no windshield, or windshield down).
- Kevlar Helmets Or combat vehicle crewman (CVC) worn while combat vehicles are operated in tactical environment.

SAFETY EQUIPMENT

- All trailers equipped with safety chains. Conduct brake, lights and turn signal check on trailer
- Low beam lights on public highways.
- Highway warning kits & SOPs.
- Chock blocks equipped & used incline or maintenance.

MOVEMENT OF PERSONNEL

Before starting the vehicle, drivers transporting personnel must set the hand brake then:

- Check tailgate, safety strap and ensure passengers are seated.

MOVEMENT OF PERSONNEL

- Driver will not back vehicle without a ground guide.
- Ground guides will check clearance & giving warning.

MOVEMENT OF PERSONNEL

- Use ground guides for all buses.
- Keep Ground Guides In View At All Times.
- If ground guides not available, dismount, Go To Rear & Check *Clearance*.

TACTICAL VEHICLE OPERATIONS

Before vehicles move in assembly areas, crew member will walk around vehicle to ensure no one is in danger.

- Ground guide required in the front & rear and visible to each other & driver.
- Wheel vehicles require 2 ground guides when backing with vision restricted.

TACTICAL VEHICLE OPERATIONS

- Commanders will apply safety standards to include:
  - Speed limits
  - Passengers transport standards
  - Vehicle maintenance

- Deviations be authorized by the unit commander In training **only**!!.

TACTICAL VEHICLE OPERATIONS

- Commanders will evaluate risk versus training benefit.
- Safety Procedures in SOP's for training.

DRIVER TRAINING PROGRAM

RESPONSIBILITIES

OPERATOR

- Operate vehicles in a safe manner.
- Report unsafe operating conditions of vehicles or equipment.
- Wear installed restraint systems.
- Insure cargo is properly loaded, secured and protected

DRIVER TRAINING PROGRAM

RESPONSIBILITIES

SENIOR OCCUPANT

- Will not permit a driver who appears fatigued, physically, mentally or emotionally impaired to operate the vehicle.
- Assist driver in recognizing unsafe traffic situations.
- Overall responsibility for safety of the occupants.

PROTECT YOUR SOLDIERS -
FROM VEHICLE RUN-OVERS

RUN-OVERS

Controls

- **Use ground guides inside bivouac & maintenance areas.**
- **Require drivers to physically check around the vehicle before before moving.**
- **Perimeter guards at dismount point.**
- **Establish safe sleep areas.**
- **Require driver to stop if ground guide instructions are unclear or loses sight.**

PROTECT YOUR SOLDIERS

ROLL-OVERS

Controls

- **Conduct recon in daylight.**
- **Use ground guide in limited visibility.**
- **Reduce speed.**
- **Watch the shoulder of the road.**
- **Properly secure loads.**
- **Rollover drills.**
- **Driver’s Training & NVD’s**

Explosives and Ammunition

- AVOID THE UXO HAZARD WHENEVER POSSIBLE
- SEND A UXO SPOT REPORT BY FASTEST MEANS AVAILABLE
- CLEARLY MARK THE UXO AREA
- PROTECTIVE MEASURES SAVE LIVES AND EQUIPMENT
- BOTTOM LINE: IF YOU DID NOT DROP IT; DON’T PICK IT UP

Handle Carefully

Explosives and Ammunition

- Ammunition is not allowed in any Fort A.P. Hill Campsite.
- Storage of your drawn ammunition will be at HOT PAD unless your unit has obtained an approved Ammunition Holding Area Site Plan

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RAIL OPERATIONS

RAIL OPERATIONS

Ground Guides

- **Training to all drivers & ground guides.**
- **Require and enforce use of ground guides - escort all vehicles on and off the railcars**
- **Require one rail-car length from the vehicle they're guiding. Remind ground guides to never walk backwards.**

Ground Guides

RAIL OPERATIONS

Ground Guides

- **Require the use of ground guides when backing or when in congested areas**
- **Two ground guides when backing or vision is restricted.**
- **Remind drivers to keep ground guides in view at all time.**

Load Teams

RAIL OPERATIONS

Load Teams

- **Ensure load teams have appropriate PPE .**
- **Ensure load teams are properly trained.**
- **Provide instruction in proper use of tools. Inspect tools, blocking, lashing, spanners, and tow bars for serviceability before use.**
- **Require all tank turrets and howitzer tubes to be in travel lock**

RAIL OPERATIONS

Power lines

- **Keep personnel away from power lines.**
- **Require antennas be removed or tied down.**
- **Require use of ball tip protectors.**

Drivers

- **Ensure only qualified drivers move the equipment**

STRESS

&

FATIGUE

DEFINITIONS

- ***Stress*** **- the bodies reaction to a harmful force, either physical or physiological. It is that state of unbalance between demands made on us from outside sources and our capability to meet those demands. It can lead to fatigue.**

- ***Fatigue*** **- the result of multiple stresses**

TYPES of STRESS

- ***Acute*** - short term. Lasts minutes to hours. Usually intense, this is the worst kind.
- Causes irrational behavior

  "I'm gonna kill someone!"

SLEEP PLANS

Everyone needs sleep (leaders too!)

Benefits of sleep/rest plans:

- **Rested soldiers.**
- **Higher morale.**
- **Greater will to fight--alert.**
- **Continuous operations.**

Sleep areas:

- **Separate sleep areas (day/night).**
- **Prohibit vehicles in sleep location.**

SLEEP PLANS - BUT NOT IN OR AROUND VEHICLES

TYPES of FATIGUE

- ***Acute*** **– short term. Caused by excessive mental and physical activity. Usually relieved with a good night's sleep.**

- ***Chronic*** **– long term. Caused when acute fatigue is prolonged. Can be incapacitating. Cannot be relieved with just a good night's sleep.**

CHARACTERISTICS of FATIGUE

ACUTE

- Stimulus
- Error in timing
- Accuracy
- Error accumulation
- Easily distracted
- Neglect of secondary tasks
- Inattention

CHARACTERISTICS of FATIGUE

CHRONIC

- **Reaction Time**
- **Poor judgement**
- **Irritated**
- **Loss of appetite**
- **Weight loss**
- **Insomnia**
- **Depression**

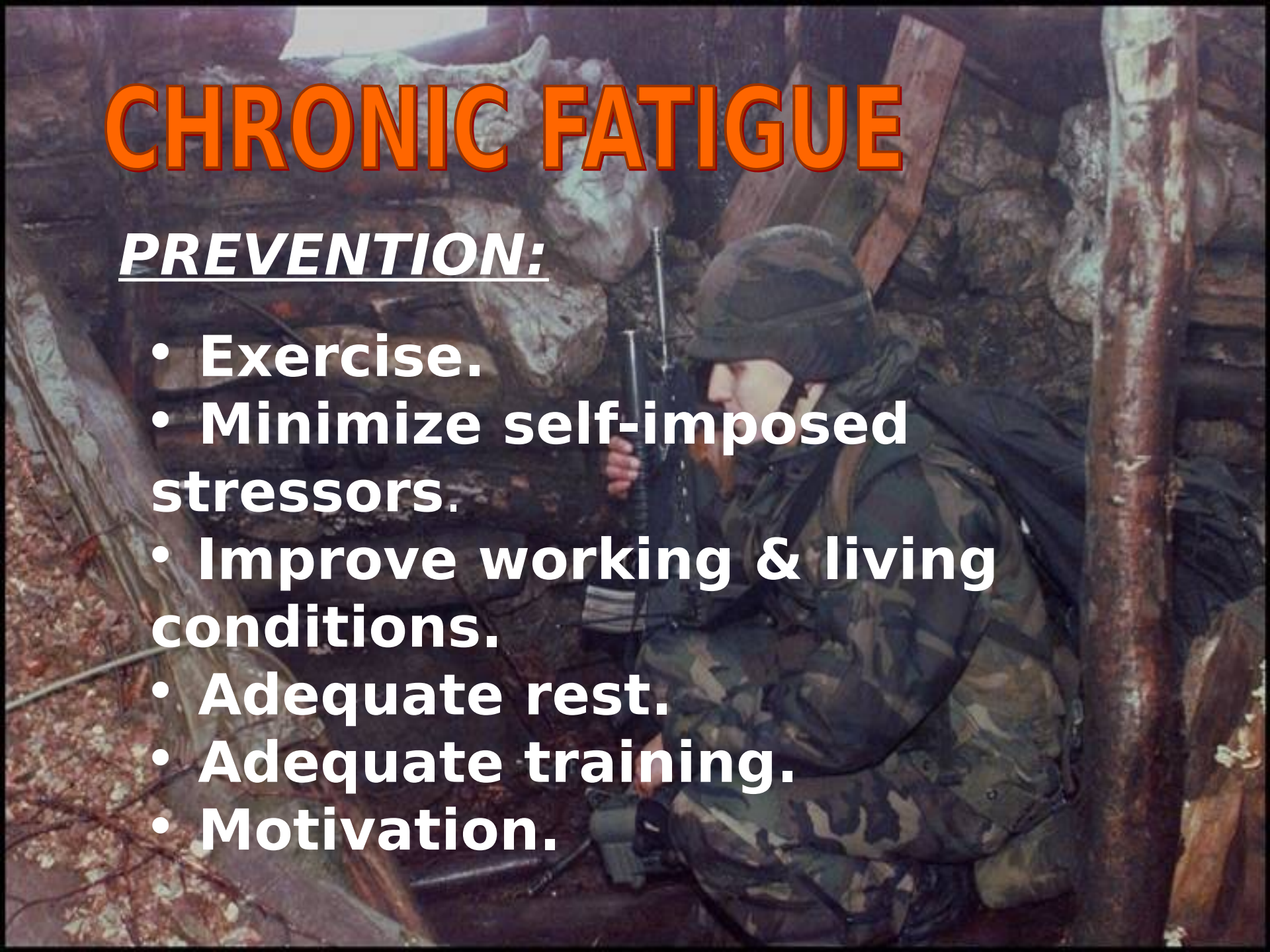
ACUTE FATIGUE

PREVENTION:

- **Physical conditioning - be in shape.**
- **Limit work periods.**

TREATMENT:

- **Rest**
- **Natural sleep (unmedicated).**



CHRONIC FATIGUE

PREVENTION:

- **Exercise.**
- **Minimize self-imposed stressors.**
- **Improve working & living conditions.**
- **Adequate rest.**
- **Adequate training.**
- **Motivation.**

CHRONIC FATIGUE

TREATMENT:

- **Remove from dangerous duties.**
- **Leave or Pass.**
- **Change duties.**
- **Avoid evacuation - psychotherapy.**

***If unsure about mental state seek medical advice**

Decompress!

FIRE PREVENTION

Overall prevention is dependent on:

- **Adequate type, number, and location of fire extinguishers.**
- **Plan for replacement or recharging of expended fire extinguishers.**
- **Train personnel on proper use of fire extinguishers.**
- **Proper storage of fuel cans.**

FIRE PREVENTION

- **Maintenance of vehicles and power generation.**
- **No smoking within 50 feet of flammable, explosives or other combustible material.**
- **Ammunitions properly stored, in approved Supply point or Holding Area, segregated, covered and marked.**

FIRE PREVENTION

Tent stoves

- Qualified operators
- Diesel/J8 fuel for M1941 (potbelly) stove
- Mogas for M1950 (yukon) stove
- Fire fighting equipment nearby.
- Pipe extends above tent and has spark arrestor.
- Cleaned daily.
- Never left unattended.

FIRE PREVENTION

- **Fuel trucks grounded as well as vehicles during refuel.**
- **Fire fighting teams identified and trained.**
- **Fire extinguishers inspected, serviceable and properly located (ie. Tents, POL points, vehicles, etc,)**
- **Procedures understood for fuel and ammo storage and delivery ops.**

FIELD/TACTICAL SITE SAFETY

Pre-Accident/Emergency Action Plans:

- **All personnel know and understand procedures (rehearse when possible).**
- **Tailored for the operation and environment. (Wildfire, Electrical/Lightning, Hurricane etc.)**
- **Evacuation and recovery could be a matter of life and death!**

FIELD/TACTICAL SITE SAFETY

Dining Facility

- Fire extinguishers
- M2 burner operations, qualified operators
- Immersion heaters
- Burns, cuts, and falls
- Field sanitation, disposal of waste

FIELD/TACTICAL SITE SAFETY

Motor pool

- **Parking plan**
- **Grounding of fuel vehicles**
- **Wheel chocks**
- **Speed of vehicles**
- **POL dispensing**
- **Tire cage**

FIELD/TACTICAL SITE SAFETY

POL Point

- Fuel testing procedures.
- Disposal of waste POL in the field.
- Tanker parking.
- Vehicle grounding.
- Proper protective equipment.
- De-contamination of personnel exposed to fuel/POL.

FIELD/TACTICAL SITE SAFETY

FARRP Operations

- Fire extinguishers
- Grounding and bonding equipment
- Aircraft parking
- Rearm pad procedures
- Ground guiding
- Proper protective equipment
- FOD survey

FIELD/TACTICAL SITE SAFETY

FARRP Operations

- Fire extinguishers
- Grounding and bonding equipment
- Aircraft parking
- Rearm pad procedures
- Ground guiding
- Proper protective equipment
- FOD survey

FIELD/TACTICAL SITE SAFETY

LZ Set-up

- Aircraft landing/take-off area, day and night considerations.
  - arrival/departure routes
  - FARP location
- Aircraft Parking
  - terrain(slopes, ruts, dust)

RE-DEPLOYMENT

Safety Considerations

Plan re-deployment with unit leaders-

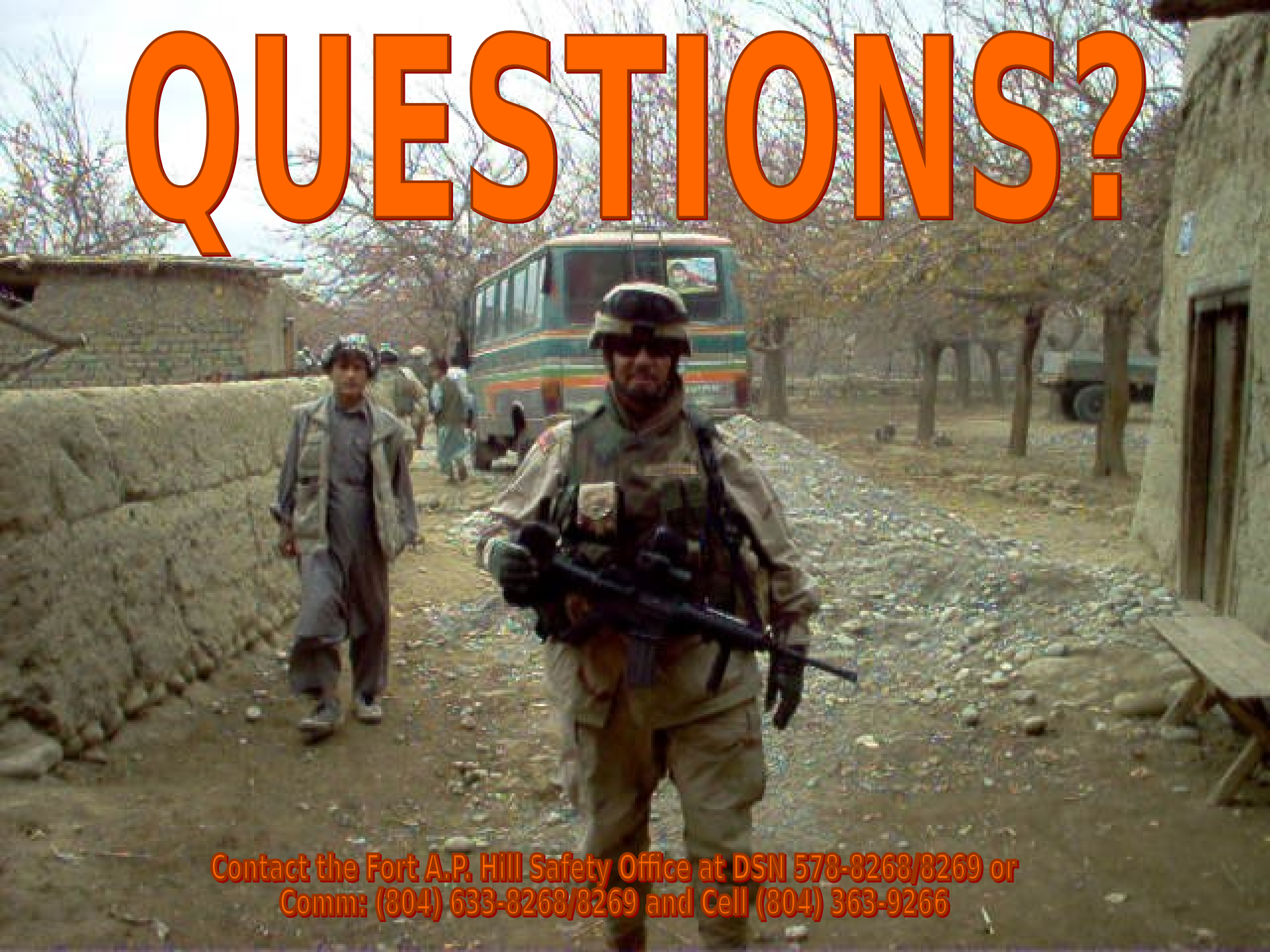
- **Monitor personnel for “get-home-it’is”**
- **Ensure pilots & drivers have adequate rest.**
- **Weather**
- **Vehicle/aircraft condition/inspection**

RE-DEPLOYMENT

Safety Considerations

Convoy operations:

- **Plan for rest stops, meal breaks.**
- **Assistant drivers, senior occupant briefings.**
- **Route.**
- **Road conditions.**
- **Alternate plan.**


QUESTIONS?
Contact the Fort A.P. Hill Safety Office at DSN 578-8268/8269 or
Comm: (804) 633-8268/8269 and Cell (804) 363-9266